SEQUENCE LISTING

- (1) GENERAL INFORMATION
- (i) APPLICANT: Chatterjee, Subroto
- (ii) TITLE OF THE INVENTION: RECOMBINANT N-SMASES AND NUCLEIC ACIDS ENCODING SAME
 - (iii) NUMBER OF SEQUENCES: (7)
 - (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: Dike, Bronstein, Roberts & Cushman, LLP
 - (B) STREET: 130 Water Street
 - (C) CITY: Boston
 - (D) STATE: MA
 - (E) COUNTRY: USA
 - (F) ZIP: 02109
 - (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Diskette
 - (B) COMPUTER: IBM Compatible
 - (C) OPERATING SYSTEM: DOS
 - (D) SOFTWARE: FastSEQ Version 1.5
 - (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER:
 - (B) FILING DATE:
 - (C) CLASSIFICATION:
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER:
 - (B) FILING DATE:
 - (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Corless, Peter F
 - (B) REGISTRATION NUMBER: 33,860
 - (C) REFERENCE/DOCKET NUMBER: 46906
 - (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 617-523-3400
 - (B) TELEFAX: 617-523-6440
 - (C) TELEX:
 - (2) INFORMATION FOR SEQ ID NO:1:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1197 base pairs
 - (B) TYPE: nucleic acid

- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
 - (v) FRAGMENT TYPE:
 - (vi) ORIGINAL SOURCE:
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

```
ATGATGACAT ATCACGAAAC GCGCGCGTTG GCTCAAAGCG ACTTACAGCA ACTCTATGCG
                                                                        60
 GCACTTGAAA CAACTGAATT TGGCGCTTAC TTTGCGACAC CCGCTGATGA TACTTTACGT
                                                                       120
 TTTGGCATTG GCGCAATCGC TACGGCAAAA ACGGCTCAGG CATTACAAGG TGCGGTTGTT
                                                                       180
 TTTGGTGCGC AGTCATTTGA TGAACAAGAG TACCCGCAGT CTGAATTGAT GGCGGGTTTT
                                                                       240
 TGGTTTGTCC CCGAAGTGAT GGTGACCATC GCGGCAGATA AAATCACGTT CGGATCAGAT
                                                                       300
 ACCGTATCTG ATTTTACGAC GTGGCTGGCG CAGTTCGTGC CAAAACAGCC AAATACGGTG
                                                                       360
 ACCACTAGTC ATGTGACAGA TGAAGTGGAT TGGATCGAAC GGACAGAGAA TTTGATTGAT
                                                                       420
 ACCTTAGCCA TCGATCAAAC CTTAGCCAAA GTCGTTTTTG GTCGGCAACA GACCCTGCAG
                                                                       480
 TTATCCGACA CGTTACGACT GGCACAAATT ATTCGTGCGT TAGCTGAGCA GGCGAATACG
                                                                       540
 TATCATGTGG TTTTAAAGCG ACATGATGAA TTGTTTATTT CAGCAACACC GGAACGGTTA
                                                                       600
 GTGGCTATGT CAGGTGGTCA GATCGCTACG GCGGCGGTCG CTGGGACAAG CCGGCGCGG
                                                                       660
□ACGGATGGCG CTGACGATAT CGCGTTAGGC GAAGCGTTGT TAGCCAGTCA GAAAAACCGC
                                                                       720
ATTGAACATC AATATGTCGT GGCAAGTATC ACGACACGCT TGCAAGACGT GACGACGTCG
                                                                       780
TICTAAAGGTGC CGGCCATGCC AAGTTTACTC AAAAATAAGC AAGTTCAGCA TTTGTACACA
                                                                       840
CCAATTACAG GGGACATTGC GGCACATTTA AGTGTGACCG CGATTGTTGA CCGCTTGCAT
                                                                       900
TICCAACACCAG CACTGGGTGG CGTCCCACGT GAAGCGGCCC TGTATTACAT TGCGACCCAT
                                                                       960
MGAGAAGACAC CTCGTGGCTT GTTTGCAGGT CCTATTGGCT ATTTTACCGC AGATAATAGT
                                                                      1020
GGGGGAATTTG TGGTTGGCAT CCGTTCCATG TATGTGAATC AAACGCAGCG ACGAGCAACT
                                                                      1080
TTATTTGCTG GTGCCGGGAT TGTGGCTGAC TCCGATGCGC AACAAGAATA TGAAGAAACT
                                                                      1140
 GGGTTGAAAT TTGAACCCAT GCGGCAATTG TTAAAGGACT ACAATCATGT CGAATGA
                                                                      1197
```

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 397 amino acids
 - (B) TYPE: amino acid
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO

Ш

ű.

ũ

- (v) FRAGMENT TYPE: N-terminal
- (vi) ORIGINAL SOURCE:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

 Met
 Met
 Thr
 Tyr
 His
 Glu
 Thr
 Arg
 Ala
 Leu
 Ala
 Gln
 Leu
 Gln
 Ser
 Asp
 Leu
 Glu
 Thr
 Thr
 Glu
 Phe
 Gly
 Ala
 Tyr
 Phe
 Ala

 Thr
 Pro
 Ala
 Asp
 Asp
 Thr
 Leu
 Arg
 Phe
 Gly
 Ile
 Gly
 Ala
 Ile
 Ala
 Thr

 Ala
 Lys
 Thr
 Ala
 Gln
 Gln
 Gln
 Gly
 Ala
 Val
 Phe
 Gly
 Ala
 Gln
 Ser

 Ala
 Lys
 Thr
 Ala
 Gln
 Gln
 Gln
 Gln
 Ser
 Gln
 Fhe
 Gln
 Fhe
 Gln
 Fhe
 Gln
 Fhe
 Fhe

65 70 75 Phe Val Pro Glu Val Met Val Thr Ile Ala Ala Asp Lys Ile Thr Phe 85 Gly Ser Asp Thr Val Ser Asp Phe Thr Thr Trp Leu Ala Gln Phe Val 105 Pro Lys Gln Pro Asn Thr Val Thr Thr Ser His Val Thr Asp Glu Val 120 Asp Trp Ile Glu Arg Thr Glu Asn Leu Ile Asp Thr Leu Ala Ile Asp 135 140 Gln Thr Leu Ala Lys Val Val Phe Gly Arg Gln Gln Thr Leu Gln Leu 150 155 Ser Asp Thr Leu Arg Leu Ala Gln Ile Ile Arg Ala Leu Ala Glu Gln 165 170 Ala Asn Thr Tyr His Val Val Leu Lys Arg His Asp Glu Leu Phe Ile 180 185 Ser Ala Thr Pro Glu Arg Leu Val Ala Met Ser Gly Gly Gln Ile Ala 195 200 205 Thr Ala Ala Val Ala Gly Thr Ser Arg Arg Gly Thr Asp Gly Ala Asp 215 220 🖺 Asp Ile Ala Leu Gly Glu Ala Leu Leu Ala Ser Gln Lys Asn Arg Ile 230 235 ∰Glu His Gln Tyr Val Val Ala Ser Ile Thr Thr Arg Leu Gln Asp Val 250 245 Thr Thr Ser Leu Lys Val Pro Ala Met Pro Ser Leu Leu Lys Asn Lys 260 265 ্রিGln Val Gln His Leu Tyr Thr Pro Ile Thr Gly Asp Ile Ala Ala His 280 275 Leu Ser Val Thr Ala Ile Val Asp Arg Leu His Pro Thr Pro Ala Leu 295 300 Gly Gly Val Pro Arg Glu Ala Ala Leu Tyr Tyr Ile Ala Thr His Glu 310 315 Lys Thr Pro Arg Gly Leu Phe Ala Gly Pro Ile Gly Tyr Phe Thr Ala 325 330 🖺 Asp Asn Ser Gly Glu Phe Val Val Gly Ile Arg Ser Met Tyr Val Asn 345 Gln Thr Gln Arg Arg Ala Thr Leu Phe Ala Gly Ala Gly Ile Val Ala 360 Asp Ser Asp Ala Gln Glu Tyr Glu Glu Thr Gly Leu Lys Phe Glu 375 Pro Met Arg Gln Leu Leu Lys Asp Tyr Asn His Val Glu 385 390 395

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7 amino acids
 - (B) TYPE: amino acid
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE: N-terminal

```
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
  Thr Ser Leu Lys Val Pro Ala
           (2) INFORMATION FOR SEQ ID NO:4:
        (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 7 amino acids
          (B) TYPE: amino acid
        (ii) MOLECULE TYPE: protein
        (iii) HYPOTHETICAL: NO
        (iv) ANTISENSE: NO
        (v) FRAGMENT TYPE: N-terminal
        (vi) ORIGINAL SOURCE:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:
Arg Ser Ile Thr Val Arg Val
1
                   5
N
ŋ
           (2) INFORMATION FOR SEQ ID NO:5:
        (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 18 base pairs
          (B) TYPE: nucleic acid
        (ii) MOLECULE TYPE: cDNA
        (iii) HYPOTHETICAL: NO
        (iv) ANTISENSE: NO
        (v) FRAGMENT TYPE:
        (vi) ORIGINAL SOURCE:
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:
 TTGCGGCACT ATTAGGTG
           (2) INFORMATION FOR SEQ ID NO:6:
        (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 18 base pairs
```

(vi) ORIGINAL SOURCE:

18

- (B) TYPE: nucleic acid
- (ii) MOLECULE TYPE:
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:

(xi)	SEQUENCE	DESCRIPTION	: SEQ	ID	NO:6:		
CGCCÂATGCC	AAAACGTA					,	18
(2	2) INFORM	ATION FOR SE	Q ID 1	NO : 7	' :		

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 50 base pairs
 - (B) TYPE: nucleic acid
- (ii) MOLECULE TYPE:
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

GATCCATGAT GACATATCAC GAAACGCGCG TTTCGTGATA TGTCATCATG

50